

### Abstract of the Disclosure

Systems, methods, and device are provided for memory management. One method embodiment includes tracking a virtual address space for a process associated with a removable, memory mappable device connected to a

5    computing device. The method includes releasing a physical address space when the device has a logical connection removed from the computing device. The method further includes registering that the virtual address space is not available to the process in a manner which does not violate semantics of an operating system upon releasing the physical address space before the process

10    has released the virtual address space.